

CLAIMS

What is claimed is:

1. An integrated access device (IAD) for providing a broadband communication link between a home phoneline networking alliance (HPNA) local area network (LAN) and an external network to form a wide area network (WAN), the HPNA LAN including a plurality of personal computers each coupled to a first building telephone line through an HPNA port, the
5 IAD comprising:

an HPNA interface coupled to the HPNA LAN;
a first processor coupled to the HPNA interface;
a memory subsystem for storing information coupled to the first processor; and
a wireless interface coupled to the first processor, the wireless interface providing a
10 communication link between the IAD and the external network.

2. The IAD of claim 1, further including:

a plain old telephone service (POTS) interface coupled between the first processor and a second building telephone line, the second building telephone line providing POTS service to at least one POTS telephone.

3. The IAD of claim 2, the POTS interface further including:

a second processor coupled to the first processor, wherein the second processor is configured to receive and decompress a compressed digital voice signal; and
a codec coupled to the second processor, wherein the codec is configured to receive the

5 decompressed digital voice signal and provide an analog voice signal to the second building telephone line.

4. The IAD of claim 3, wherein the codec is also configured to provide a data signal to a third building telephone line.

5. The IAD of claim 3, wherein the codec is also configured to receive a non-compressed digital voice signal from the first processor and provide a corresponding analog voice signal to the second building telephone line.

6. The IAD of claim 3, wherein the second processor is a digital signal processor.

7. The IAD of claim 1, wherein the HPNA port is provided by a universal serial bus (USB) adapter configured to transfer information between a USB port of one of the personal computers and the first building telephone line.

8. The IAD of claim 3, wherein the HPNA port is provided by a peripheral component interconnect (PCI) card configured to transfer information between a PCI bus of one of the personal computers and the first building telephone line.

9. An integrated access device (IAD) for providing a broadband communication link between a home phoneline networking alliance (HPNA) local area network (LAN) and an external network to form a wide area network (WAN), the HPNA LAN including a plurality of

personal computers each coupled to a first building telephone line through an HPNA port, the

5 IAD comprising:

an HPNA interface coupled to the HPNA LAN;

a first processor coupled to the HPNA interface;

a memory subsystem for storing information coupled to the first processor;

a communication interface coupled to the first processor, the communication interface

10 providing a communication link between the IAD and the external network, wherein the communication interface is configured to include one of a wireless interface and a digital subscriber line (DSL) interface; and

15 a plain old telephone service (POTS) interface coupled between the first processor and a second building telephone line, the second building telephone line providing POTS service to at least one POTS telephone.

10. The IAD of claim 9, the POTS interface further including:

a second processor coupled to the first processor, wherein the second processor is configured to receive and decompress a compressed digital voice signal; and

a codec coupled to the second processor, wherein the codec is configured to receive the

5 decompressed digital voice signal and provide an analog voice signal to the second building telephone line.

11. The IAD of claim 10, wherein the codec is configured to provide data to a third building telephone line.

12. The IAD of claim 10, wherein the codec is also configured to receive a non-compressed digital voice signal from the first processor and provide a corresponding analog voice signal to the second building telephone line.

13. The IAD of claim 9, further including:

a plain old telephone service (POTS) client coupling a POTS telephone to the HPNA network, the POTS client configured to separate digital voice signals and digital data signals supplied on the first building telephone line and provide analog voice signals to the POTS 5 telephone.

14. The IAD of claim 13, wherein the POTS client is powered by the IAD through the first building telephone line.

15. The IAD of claim 9, wherein the second processor is a digital signal processor.

16. The IAD of claim 9, wherein the HPNA port is provided by a universal serial bus (USB) adapter configured to transfer information between a USB port of one of the personal computers and the first building telephone line.

17. The IAD of claim 9, wherein the HPNA port is provided by a peripheral component interconnect (PCI) card configured to transfer information between a PCI bus of one of the personal computers and the first building telephone line.

18. A method for providing a broadband communication link between a home phoneline networking alliance (HPNA) local area network (LAN) and an external network to form a wide area network (WAN), the HPNA LAN including a plurality of personal computers each coupled to a first building telephone line through an HPNA port, the method comprising
5 the steps of:

providing an HPNA interface coupled to the HPNA LAN;
providing a first processor coupled to the HPNA interface;
providing a memory subsystem for storing information coupled to the first processor;

and

10 providing a communication interface coupled to the first processor, the communication interface providing a communication link between the IAD and the external network, wherein the communication interface is configured to include one of a wireless interface including a wireless modem and a digital subscriber line (DSL) interface including a DSL modem; and

15 providing a plain old telephone service (POTS) interface coupled between the first processor and a second building telephone line, the second building telephone line providing POTS service to at least one POTS telephone.

19. The method of claim 18, further including the steps of:

providing a second processor coupled to the first processor, wherein the second processor is configured to receive and decompress a compressed digital voice signal; and

5 providing a codec coupled to the second processor, wherein the codec is configured to receive the decompressed digital voice signal and provide an analog voice signal to the second building telephone line.

20. The method of claim 19, wherein the codec is configured to provide digital data to a third building telephone line.

21. The method of claim 19, wherein the codec is also configured to receive a non-compressed digital voice signal from the first processor and provide a corresponding analog voice signal to the second building telephone line.

22. The method of claim 18, further including the step of:
providing a plain old telephone service (POTS) client coupling a POTS telephone to the HPNA network, the POTS client configured to separate a digital voice signal and digital data signal supplied on the first building telephone line and provide an analog voice signal to the POTS telephone.
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23. The method of claim 22, wherein the POTS client is powered by the IAD through the first building telephone line.

24. The method of claim 18, wherein the second processor is a digital signal processor.

25. The method of claim 18, wherein the HPNA port is provided by a universal serial bus (USB) adapter configured to transfer information between a USB port of one of the personal computers and the first building telephone line.

26. The method of claim 18, wherein the HPNA port is provided by a peripheral component interconnect (PCI) card configured to transfer information between a PCI bus of one of the personal computers and the first building telephone line.